Functional Geometry Fabrication: 3D Printing and Molded Interconnect Devices

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3D Printing and MID (Molded Interconnect Device)

Developing functional 3D geometrical shapes out of various materials and composites enables us to create broad series of mechatronic devices and systems. In this laboratory, we emphasize on Additive Manufacturing and MID (Molded Interconnect Device) fabrication technologies, and its applications.

Research Projects

MID : Molded Interconnect Device

Research on Fabrication Process
- MID fabrication process utilizing sacrificial material
- Circuit pattern transfer process to inner surface of parts using sacrificial material.

Applicational Researches
- Application on MID technology to mechatronic devices
- High functional fluid channel by injection molding
- Injection Molded Functional Fluid Channel

Additive Manufacturing

Research on fabrication process
- Preheating Process in Laser Sintering Fabrication
- Low Temperature Laser Sintering with Heat Resistance Powder

Application research
- Laser Sintering Fabrication realizing High Porosity and Intensity
- Laser Sintering Fabrication of Tissue Engineering Scaffolds
- Application of Photonic Device using Laser Sintering Fabrication

Circuit patterning to arbitrary curved surface

Arbitrary surface, form, and shape structuring